



SATA III M.2 SSDs

MTS580P

Transcend's MTS580P industrial-grade SATA III M.2 2242 DRAM-less solid-state drive features BiCS8 218-layer 3D NAND flash and power loss protection (PLP) technology to help maintain data integrity during unexpected power loss. Its DRAM-less architecture helps reduce overall power consumption and system costs, while its M.2 2242 form factor offers greater flexibility in system design, making it suitable for space-constrained embedded systems and industrial equipment.

Designed for demanding industrial environments, the MTS580P supports a wide operating temperature range of -40°C to 85°C. It also undergoes rigorous in-house testing to help ensure reliable operation in demanding industrial environments.

Hardware Features

- Compliant with RoHS standards
- Endurance: 3K P/E cycles (Program/Erase cycles) guaranteed
- Space-saving M.2 form factor (42mm) – ideal for mobile computing devices
- Power Loss Protection (PLP) to prevent data loss in the event of sudden power outage
- Supports Transcend Scope Pro software

Ordering Information

128GB	TS128GMTS580P
256GB	TS256GMTS580P
512GB	TS512GMTS580P
1TB	TS1TMTS580P
2TB	TS2TMTS580P

Firmware Features

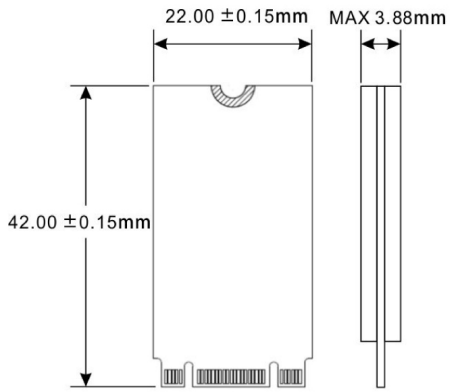
- Built-in LDPC ECC (Error Correction Code) functionality
- Advanced Global Wear-Leveling and Block management for reliability
- Advanced Garbage Collection
- Supports S.M.A.R.T. function to conduct health monitoring, analysis, and reporting for storage devices
- TRIM command for better performance

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Specifications

Appearance	Dimensions	42 mm x 22 mm x 3.88 mm (1.65" x 0.87" x 0.15")
	Weight	5 g (0.18 oz)
	M.2 Type	2242-D5-B-M (Double-sided)
	Form Factor	M.2 2242
Interface	Bus Interface	SATA III 6Gb/s
Storage	Capacity	128 GB / 256 GB / 512 GB / 1 TB / 2 TB
	Flash Type	218-layer 3D NAND flash
Operating Environment	Operating Voltage	3.3V±5%
	Operating Temperature	Wide Temp. -40°C (-40°F) ~ 85°C (185°F)
	Storage Temperature	-55°C (-67°F) ~ 85°C (185°F)
	Humidity	5% ~ 95%
	Shock	1500 G, 0.5 ms, 3 axis
	Vibration (Operating)	20 G (peak-to-peak), 7 Hz ~ 2,000 Hz (frequency)
Power	Power Consumption (Operation)	0.73 watt(s)
	Power Consumption (IDLE)	0.24 watt(s)
Performance	Sequential Read/Write (CrystalDiskMark)	Read: Up to 560 MB/s Write: Up to 515 MB/s
	4K Random Read/Write (IOmeter)	Read: Up to 70,000 IOPS Write: Up to 85,000 IOPS
	Mean Time Between Failures (MTBF)	3,000,000 hour(s)
	Terabytes Written (TBW)	Up to 2,700 TBW
	Drive Writes Per Day (DWPD)	2.46 (3 yrs)
Warranty	Certificate	CE / UKCA / FCC / BSMI
	Warranty	Three-year Limited Warranty

Mechanical Dimensions



Product specifications are subject to change without notice. Pictures shown may differ from actual products. Total accessible capacity varies depending on operating environment. Due to the complexity and variety of industrial applications, Transcend cannot guarantee 100% compatibility with all platforms and under all scenarios. For special applications and environments, it is strongly suggested that you contact Transcend beforehand for clarification.

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